(located in perinephric fat), ureteric, adrenovolumbar, paravertebral, hemiazygous, gonadal, lumbar and inferior phrenic veins.

The high association of this finding with tumor invasion is a valuable preoperative sign that should alert the radiologist and urologist not only to the presence of renal vein invasion but also to the size and number of vessels that may be encountered at operation.

JACK I. EISENMAN, M.D.

REFERENCE

Eisenman JI, Finck EJ, O'Loughlin BJ: Collateral vein sign: Angiographic demonstration of renal vein invasion in renal carcinoma. Radiology 92: 1256-1261, May 1969

New Techniques in Pulmonary Angiography

In spite of recent advances in pulmonary scanning, pulmonary angiography is still an important and, indeed, the most reliable diagnostic test for delineating pulmonary thromboembolism. New techniques have been devised to both facilitate and improve the quality of the study.

A percutaneous right femoral vein approach allows rapid catheterization reliably permitting use of catheters of a more suitable size than may be possible through the more conventional approach by venous cutdown on the anticubital fossa. A small reverse curve to the distal tip combined with a pigtail facilitates the procedure even further as well as enhancing its safety.

Another technique worthy of note is segmental pulmonary arteriography which has its greatest value in chronic recurrent pulmonary embolism. Segments of the lungs are selectively catheterized and injected with contrast medium using very fine detail technique allowing demonstration of old residual of embolic disease.

J. H. GROLLMAN, JR., M.D.

REFERENCES

Bookstein JJ: Segmental arteriography in pulmonary embolism. Radiology 93:1007-1012, 1969

Grollman JH Jr, Gyepes MT, Helmer E: Transfemoral selective bilateral pulmonary arteriography with a pulmonary-artery-seeking catheter. Radiology 96:202-204, 1970

Ranniger K: Pulmonary arteriography: A simple method for demonstration of clinically significant pulmonary emboli. Am J Roentgenol Radium Ther Nucl Med 106:558-562, Jul 1969

Transfemoral Selective Coronary Arteriography

Selective coronary arteriography may be accomplished safely by way of a percutaneous transfemoral approach utilizing specially designed preformed catheters. These catheters are designed to seek out the coronary ostia without the necessity of the extensive manipulations required in the more established Sones technique which involves a flexible catheter passed by way of the brachial artery. Because of the somewhat greater selectivity permitted by the various femoral techniques, improved detail of filming can be obtained which is so important for proper patient selection for the recently developed saphenous vein aorto-coronary bypass procedures.

J. H. GROLLMAN, JR., M.D.

REFERENCES

Judkins MP: Percutaneous transfemoral selective coronary arteriography. Radiol Clin N Am 6:467-492, Dec 1968

Spellberg RD, Ungar I: The percutaneous femoral artery approach to selective coronary arteriography. Circulation 36:730-733, Nov 1967 Sones FM Jr., Shirey EK: Cine coronary arteriography. Mod Concepts Cardiovasc Dis 31:735-738, 1962

Wilson WJ, Lee GB, Amplatz K: Biplane selective coronary arteriography via percutaneous transfemoral approach. Am J Roentgenol Radium Ther Nucl Med 100:332-340, June 1967

Selective Arterial Infusions of Vasoconstricting Agents in the Control of Gastrointestinal Hemorrhage

A recent outgrowth of the use of angiography in the diagnosis of gastrointestinal bleeding has been the selective intra-arterial infusion of vasoconstricting drugs to control acute gastrointestinal hemorrhage.

Both pitressin and a combination of epinephrine and propranolol have been used to control arterial hemorrhage, while pitressin has been used to reduce portal venous pressure and thus control variceal bleeding. After the site of bleeding has been demonstrated angiographically, the